

CLAIMS

What is claimed is:

1. A method of automatically initializing a first device on a network comprising:
requesting configuration information from a second device upon connecting
the first device to the network;
delaying a period of time before deciding that no configuration information is
available;
providing configuration services to said network if a response to said
configuration information request is not received from said second
device within said period of time;
providing said configuration services to said network if said first device has a
higher priority than said second device.
continuously monitoring said network to detect a connection of an additional
device to said network.

2. The method defined in claim 1, wherein said providing said configuration
services comprises:
automatically determining a first network address;
automatically assigning a second network address;
automatically assigning a network name;
automatically correlating said first network address, said second network
address, and said network name; and
recording said correlated first network address, said correlated second network
address and said correlated network name in a table.

1 3. The method defined in claim 2, wherein said first network address comprises a
2 media access control (MAC) address.

1 4. The method defined in claim 2, wherein said second network address comprises
2 an Internet Protocol (IP) address.

1 E/ 5. The method defined in claim 2, wherein assigning said network name comprises:
2 detecting a network name conflict;
3 resolving said network name conflict; and
4 recording a code in said table to indicate said network name conflict.

1 6. The method defined in claim 2, wherein said network name is suggested by said
2 first device.

1 7. The method defined in claim 1, wherein said period of time is varied so as to
2 prevent race conditions.

1 8. A method of automatically allocating network information comprising:
2 assigning a network address to a device;
3 assigning a network name to said device;
4 correlating said network name with said network address; and
5 recording said correlated network name and said correlated network address
6 in a table to allow a user to refer to said device by said assigned network
7 name independent of said assigned network address.

1 9. The method defined in claim 8, wherein assigning said network name comprises
2 resolving a network name conflict when said network name is already in use.

1 10. The method defined in claim 9, wherein said network name is suggested by said
2 device.

1 11. The method defined in claim 8, wherein said network address is assigned using
2 Dynamic Host Configuration Protocol (DHCP).

1 12. A method of automatically initializing a network comprising:
2 automatically assigning an address to a device on said network;
3 automatically assigning a network name to said device on said network;
4 automatically supplying user and group information across said network; and
5 automatically determining service capability of said device on said network.

1 13. The method defined in claim 12, wherein supplying user and group
2 information comprises:
3 detecting when said device is connected to said network;
4 sending a first user and group list to said device in response to said device
5 connecting to said network;
6 said device comparing said first user and group list with a second user and
7 group list resident on said device; and
8 said device determining whether said first user and group list or said second
9 user and group list is more recent;
0 receiving a more recent user and group list from said device;
1 updating said user and group information to reflect said more recent user and
2 group list; and
3 propagating said updated user and group information throughout said
4 network.

1 14. The method defined in claim 13, wherein a time-stamp is used to determine
2 whether said first user and group list or said second user and group list is more
3 recent.

1 15. The method defined in claim 13, wherein updating said user and group
2 information comprises recording said more recent user and group list in clear text.

1 E/ 16. The method defined in claim 15, wherein updating said user and group
2 information comprises encrypting said user and group information prior to
3 transmission across said network.

1 17. The method defined in claim 12, further comprising:
2 correlating said network address and said network name; and
3 storing said correlated network address and said correlated network name in a
4 table.

1 sub 18. The method defined claim 12, wherein said network name is suggested by said
2 device.
E/

1 sub 19. The method defined in claim 12, wherein HyperText Transfer Protocol (HTTP) is
2 used to exchange information.
E/

1 20. The method defined in claim 12, wherein Service Location Protocol (SLP) is
2 used to exchange information.

1 sub 21. A network comprising:
sub
E/

2 a first device coupled to said network, said first device configured to
3 automatically
4 request a first network address;
5 receive said first network address from a second device coupled to said
6 network;
7 provide a network configuration if said first network address is not
8 received from said second device;
9 determine its priority level on said network if said first network
0 address is received from said second device; and
1 provide said network configuration if said priority level is higher than
2 a second priority level of said second device.

1 22. The network defined in claim 21, wherein said first device is a networked office
2 appliance.

1 23. The network defined in claim 21, wherein the first device is further configured
2 to automatically:

3 assign a second network address;
4 assign a network name;
5 correlate said second network address with said network name; and
6 record said correlated second network address and said correlated network
7 name in a table.

1 24. The network defined in claim 23, wherein said table further comprises:
2 a Media Access Control (MAC) address; and
3 a code to indicate a conflict with said network name.

E1
Sub
E1
25. The network defined in claim 23, wherein said first and second network
addresses comprise Internet Protocol (IP) addresses.

26. A network comprising:
a first device configured to
assign an address to a second device on said network;
assign a network name to said second device on said network;
supply user and group information across said network; and
determine service capability of said second device on said network.

27. The network defined in claim 26, wherein said user and group information
comprises:
a list comprising
a user name;
a password;
a group name having a second list of members allowed access to said
group;
a time stamp; and
a character encoding code.

28. The network defined in claim 27, wherein said password is recorded in clear text.

29. A method for automatically discovering services comprising:
gathering individual service lists;
creating a master service list accessible by network clients;
accessing the master service list for a first network device to determine if a
second network device provides a desired service.

ed in cl
orm the

add
C7

THE UNIVERSITY OF CHICAGO